

Portable Spectrophotometer CS-500/520



CS-500



CS-520

ColorSpec for High Accuracy Color Test

- It can pass Level I of National Institute Metrology
- Spectrophotometer, 20 kinds of color spaces, 26 kinds of illuminants

Excellent Inter-instrument Agreement and Repeatability

- Level I national institute metrology
- Repeatability < 0.03*
- Inter-instrument agreement < 0.2
- Ensures test results consistency of different devices



Auto Calibration

The revolutionary auto calibration technology allows the instrument to achieve automatic calibration, which greatly improves the user experience.





Connect to APP to expand more functions

Connect to APP to find the similar color from different color swatches.

Personal color database can also be established

Samples saved in cloud can be set into target for color difference test

Multi-function Calibration Base

Combine calibration and charging in one base

When instrument is placed on the base, it will be automatically charged and calibrated which saves a lot of time for user.



Switchable Apertures

Durable and stable aperture sizes to measure samples with different sizes

Camera to see the measurement area

Integrated camera to see the measurement area for accurate test





Excellent Appearance Design

- One-piece body, streamlined appearance
- Ergonomic design
- Vertical design, vertical placement not only saves space but is more stable



Color Spec Product Advantages

- High accuracy, it can pass Level I metrology
- Auto calibration for better user experience
- Connect to APP to find similar color
- UV included /UV excluded ,UV calibration
- Multi-function calibration base, combine calibration and charging functions
- SCI/SCE
- Integrated camera to see the measurement area for accurate test

Model	CS-500	CS-520
Picture		
Color	Black	White
Geometry	d/8(diffused illumination,8° viewing) SCI(Specular Component Included)	d/8 (diffused illumination,8° viewing) SCI (Specular Component Included) SCE (Specular Component Excluded)
Repeatability	Chromaticity value: Max. :dE*ab< 0.1 Average :dE*ab< 0.05 standard deviation within ΔE*ab 0.03 (when a white tile is measured 30 times at 5-seconds interval) Reflectance: standard deviation < 0.1%	Chromaticity value: Max. :dE*ab< 0.04 Average :dE*ab< 0.03 standard deviation within ΔE*ab 0.02 (when a white tile is measured 30 times at 5-seconds interval) Reflectance: standard deviation < 0.1%
Inter-instrument agreement	ΔE*ab < 0.3 (BCRA Series II, average measurement of 12 tiles, MAV/SCI)	ΔE*ab < 0.2 (BCRA Series II, average measurement of 12 tiles, MAV/SCI)
Display Accuracy	0.1	0.01
Illumination Area/Aperture	MAV:φ 8mm/φ 11mm	MAV:φ 8mm/φ 11mm MAV φ 4mm/φ 6mm MINI: 1*3mm
Standards	Conform to CIE No.15, GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7	Conform to CIE No.15, GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7
Spectroscopic Method	concave grating spectroscopy	concave grating spectroscopy
Sensor	256 pixel CMOS sensor	256 pixel CMOS sensor
Color Spaces and Indices	Reflectance, CIE-Lab, CIE-LCh, HunterLab, CIE Luv, XYZ, Yxy, RGB, Color difference(ΔE*ab, ΔE*cmc, ΔE*94,ΔE*00),WI(ASTM E313-00,ASTM E313-73,CIE/ISO, AATCC, Hunter, Taube Berger Stensby), YI(ASTM D1925,ASTM E313-00,ASTM E313-73), Blackness(My,dM),Color Fastness, Tint,(ASTM E313-00),Color Density CMYK(A,T,E,M), Milm, Munsell, Opacity, Color strength	Reflectance, CIE-Lab, CIE-LCh, HunterLab, CIE Luv, XYZ, Yxy, RGB, Color difference(ΔE*ab, ΔE*cmc, ΔE*94,ΔE*00),WI(ASTM E313-00,ASTM E313-73,CIE/ISO, AATCC, Hunter, Taube Berger Stensby), YI(ASTM D1925,ASTM E313-00,ASTM E313-73), Blackness(My,dM),Color Fastness, Tint,(ASTM E313-00),Color Density CMYK(A,T,E,M), Milm, Munsell, Opacity, Color strength
Sphere Size	40mm	40mm
Light Source	LED(Full band balanced LED)	LED(Full band balanced LED)
Wavelength Interval	10nm	10nm
Wavelength Range	400-700nm	400-700nm
Reflectance Range	0-200%	0-200%
Reflectance Resolution	0.0001	0.0001
Test Time	About 2s	About 1s
Interface	USB,Bluetooth	USB,Bluetooth
Illuminants	A,B,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U30,U35,DLF,NBF,TL83,TL84	A,B,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U30,U35,DLF,NBF,TL83,TL84
Observer Angles	2°, 10°	2°, 10°
Screen	IPS Full Color Screen,2.4 inches	IPS Full Color Screen,2.4 inches
Battery	Rechargeable, 8000 times continuous tests, 3.7V/3000mAh	Rechargeable, 8000 times continuous tests, 3.7V/3000mAh
Lamp Lifetime	10 years, 1 million tests	10 years, 1 million tests
Language	Chinese and English	Chinese and English
Calibration	Auto	Auto
Software	Andriod,IOS,Windows	Andriod,IOS,Windows
Camera	without	with
Pass Metrology	Yes, metrology level I	Yes, metrology level I
Storage	APP mass storage	APP mass storage